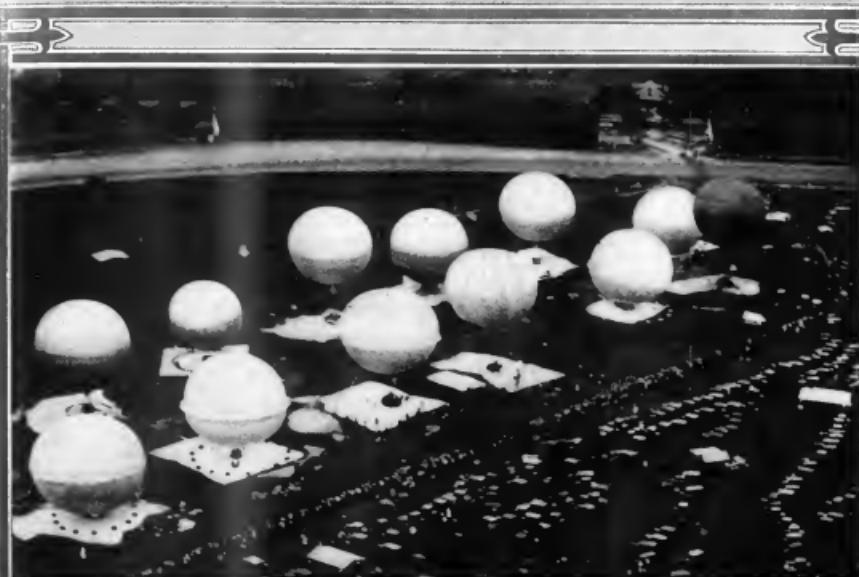


AVIATION

JULY 30, 1923

Issued Weekly

PRICE 10 CENTS



Start of the National Balloon Race, Indianapolis, July 4

VOLUME
XV

NUMBER
5

SPECIAL FEATURES

ARMY BALLOON WINS NATIONAL RACE
AMERICAN ENTRANTS IN SCHNEIDER RACE
PREPARATORY WORK FOR ST. LOUIS AIR RACES
LIEUT. MAUGHAN'S SECOND DAWN TO DUSK FLIGHT

THE GARDNER, MOFFAT CO., INC.
HIGHLAND, N. Y.
225 FOURTH AVENUE, NEW YORK

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JULY 30, 1923

AVIATION

VOL. XV. NO. 5

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3, 1879.

THOMAS-MORSE AIRCRAFT CORPORATION

CONTRACTORS TO U. S. GOVERNMENT

ITHACA,



NEW YORK

THE Wright Aeronautical Corporation announces that it has acquired by merger the assets and business of the Lawrence Aero Engine Corporation.

By this acquisition, the Wright Company adds to its present line of water cooled airplane motors the Lawrence line of air cooled motors.

The Lawrence Company has been the pioneer in the development of air cooled motors and today has the only fully developed line now being produced in this country.

The increased engineering and production facilities resulting from the merger of the Lawrence and Wright Companies will result in an increased speed of development in the air cooled type of engine, which is rapidly becoming a vital factor in aviation.

WRIGHT AERONAUTICAL CORPORATION
Paterson, New Jersey, U.S.A.



W R I G H T

L. D. GOSSETT, PRESIDENT
W. D. MORSE, VICE PRESIDENT
L. D. WRIGHT, TREASURER
George Nitschke, GENERAL MANAGER

Vol. XV

July 30, 1923

AVIATION

LAWRENCE & CO., INC.
Vinson E. Clark
Lawrence P. Warden
Ralph H. Linsen
DIRECTORIAL STAFF

No. 5

Flier vs. Non-Flier

I would be difficult to express clearly the opinion that the average flier holds of the non-flier, and almost equally so certain attitude of the so called "flier" in respect to the non-flier. Pilots are, as a rule, young men whose aquaintance with business has been slight, and who yet have had the unnecessary experience of becoming proficient in a new artistry in their careers.

Perhaps it is not too weak to say that the general public looks upon the aviator as a daring or reckless person of the "adventure" type. This may have had the effect of increasing the temerarious character of the young pilot. At any rate it is generally felt by non-fliers that the pilot, while he needs an element, is not to be counted on as an or-cause or business executive.

The pilot, on the other hand, feels that the man who doesn't in any way appreciate engineering, managing, or marketing, has no right to the application of engineering to aircraft in either flying or non-flying. He prefers the "feel" of a day-to-day technical analysis, and looks upon the aircraft manufacturer as one who is only thinking of contracts and must be checked up at all times. As to the pilot's attitude toward those non-fliers who rank them as the service or who direct their operations in commercial aviation, he feels that he could be given the widest latitude of judgment and not be subjected to the immediate detection of a non-flier. Some pilots, in reflecting many of the factors that enter into sound business enterprise feel that they can make a success of air transport on the strength of their own flying experience, and many such enterprises have failed on this account.

The truth of the matter is that both the flier and non-flier in aviation must learn to respect each other and know that one is a necessary complement of the other. The business man of large interests is needed to put aviation in a sound financial basis, his general business experience is a valuable asset in management and operation. The pilot, on the other hand, is just as important a factor in the success of an aeronautical enterprise, as is the captain, his skill, judgment and devotion that the safety of the passengers and cargo, and the smooth operation of the service depend.

Gas and Capital Ships

THIS issue with which aircraft can lay a barrage of poison gas before an enemy fleet is compensated by Law's "Fool." There is an article in the July issue of the *Proceedings of the U. S. Naval Institute*. It pictures the officers and crew of a battleship in action as loaded down with gas masks, oxygen tanks, shells, carbines, and with all that an admiral wants during the multifarious work required on a battleship in action.

It will be recalled that the Germans in 1917 made poison gas in a smoke screen and gave the English fleet a dangerous surprise. Even though the passage through the smoke screen took only a minute, the English crews were thrown into paroxysms of nausea and were incapacitated for action for some time after.

The battleship, during action, is not the pleasant place in which to work even under the most favorable conditions of the sea in winter. The latest type of a sailor, strapped to the waist and serving his gun will probably be separated by sea with the protective armor that modern warfare requires.

Even though the use of gas poison gas is limited by international agreements, there do not include the possible carriers nor are they engaged in military or naval studies on a certain preservation of the use of gas in extreme emergency. We hear comparatively little of gas attack and defense developments, probably on account of the agreements entered into, but it will be much better to have a more practical form of gas than the agreement of diplomatic representatives. During the tests to be made this time by the Army Air Service with all kinds of gas objectives, an important result can be obtained that is interesting the possibilities of gas attack.

The Navy evidently thinks little of this matter, for the article mentioned concludes by expressing the hope that "if the article succeeds in starting just one or two warship arguments, our desire will have been realized, for the truth of the matter is that the service is in the process to minimize the danger from gas, etc., what is worse, not to give the subject much thought at all."

Another Old Saying Gone

A squirrel as a bird, has been for centuries an experiment representing the ultimate in speed. Now comes Col. R. Memphrion of England who has timed the speed of birds with aerialists, measuring apparatus and we learn that bird flight is comparatively slow.

From various observations, the following speeds for common birds were determined in miles per hour: Hawks, 32-38, swallows, 33-40, crows, 37, swifts, over 60; pigeons, 51, grays, 55, ducks, 42-55, and lapwings, 46-55. In conclusion Colonel Memphrion finds that birds have two speeds, one a normal rate used for everyday purposes and also for migration, and an accelerated speed, which is used for protection or pursuit and which in some cases nearly equals the rate of normal speed.

So another aphorism is laid away between the pages of Father Tuck's memory book, and some new sage aged soul gives the world a new result that will indicate that speed over miles two hundred, three hundred and even more miles an hour

magistrate Nefferville's comment from that point on as an indication. At this time, about 18:30 CDT, I decided that due to the unstable conditions of the atmosphere I could not accomplish a much greater distance by flying straight. I then turned about 10° clockwise, the rest on the right. I then reached about sixteen miles of balloon and other available disposable materials, amounting to over 500 lb. There was a good surface wind from 35 to 37 mph, blowing from N.W., and I reckoned to make the greatest distance from Indianapolis, and I was certain that I could be able to stay in the air at least until 06:00 p.m. In this respect I was correct. After 06:00 p.m. I had a check and I reckoned to fly at very conservative altitude and rate and the experience conditions such as we had just been through. The drag rope was therefore lowered at 18:15 and I let the balloon ride near the ground, letting no balloon at all except small hand full now and then when it was necessary, to clear a house. The method of procedure was to let the balloon ride near the ground as long as dangerous obstacles were present, then to raise the balloon and ascend a half mile or three times. I went about to eat it away when I estimated the elevation of some people and added them to the balloon as a great deal of wind at about twenty miles per hour struck the balloon, causing it to drop into the house roof of a two-story house. I was lucky to have landed in the kitchen of the house, padding out from the balloon. "The forced me to land at once and ended the race as far as the balloon was concerned."

Winterton Notes

The Navy balloons who landed off in the Indianapolis River on the Fourth were supplied with weather information provided by the Navy Aerological personnel that was superior to any data obtainable from other sources.

The eight before the nose point balloons were sent up to determine the wind direction and velocity. This necessitated some point balloons carrying lanterns, a plan as unnecessary practice that only the Navy was courageous to do at this time. Further wind observations at high altitude were taken shortly before the flight on the next day.

During the flight made by Lt. Col. J. H. Lachance and Lt. Col. F. M. Kneidlerder, aerological offices of the Bureau of Standards, several pilot balloons were released and observations were made in

the aviators to observe better air currents above or below them. They reached these favorable currents by letting out gas in descent and by throwing out ballast to ascend.

included instruments to show the inhibition of thermoelectric and the temperature and pressure variations in their relation to weather changes.

"Complete reports of winter conditions submitted by Navy crews in the National Elimination Free Balloon Race are not yet available. Considerable aerial information at interest was collected by the balloon A-6238. The crew

typical equipment was found very useful, especially the method of taking upper air readings during the flight, which was worked out previous to the race by the Aerological Section of the Bureau of Aeronautics. The method overcomes difficulties which have previously existed in the kind of wind readings by the baro. A variety of wind velocities and directions in different strata of the air were detected by this means, and were used to great advantage in making distance.

During the comparative showers of the flight of the A-37B, it was not necessary to use the helium tanks to inflate the pilot balloons en route. The balloons which were inflated before the storm contained sufficient gas left to be useful for some time. (18 to 20 hr.) If the flight had not been terminated so abruptly by the thunderstorms, there is no doubt that the helium tanks would have been needed for filling the balloons the second day out.

"By midafternoon on Thursday, before 8-5780 had 600 ft. of sand inflow left, (leaving one-half of the total). The Indians had successfully dredged eight or ten thousand cubic yards between eleven and four, by changing the course by flying at different altitudes. About 4 p.m., however, large cumulus clouds began to close in on all sides and it was assumed

try to discern where the clouds were they were too high up. Bassett was made with the intention of riding his drag rope in the hope of warning the flyers of the danger and rounding up for the night. The balloons, however, were so numerous that he could not get through them. The maximum velocity, over from 3000 ft. to a height of 10,000 ft., remained at this height for about one half hour. The temperature at that height was 35 deg. Fahrenheit which started descent again and the balloon came down through 1000 to 600 ft. of cumulus clouds, which was a great hinderance. After landing in the woods in Chester County, Pa., he was captured.

Because of the amount of balloon left before entering Pennsylvania it seems likely that the world record would have been broken in the site until Friday noon or later, if it had not been interfered with by falling showers. The velocity structure of the wind which prevailed at that time and which has been verified by successive reports of the Weather Bureau, shows that the winds at 10,000 ft. above sea level, would have been very light if the flight had remained until forced to land because of shortage of balloons.

"One remarkable incident of the flight was the fact that all balloons were lost sight of soon after the start, the following morning more than an hour later. From other balloonists comes a sight of such other balloons as were seen in the sky. One pilot saw a single cloud about 1000 ft. above him. Two others landed in the same neighborhood. The fourth which evidently was a Army entry (Lieutenant Miller, pilot) remained at 10,000 ft. and somewhat later was disappeared behind a cumulus cloud about 3:30 p.m. It was later found that it had landed near Kutztown, Pa., some 35 miles southwest of the starting place of the flight. A 500 ft. tall mast was erected near the landing point to that of the A-2000.

A 4-2000 was made without incident in a small field about 180 ft. from a road, on the farm of G. D. Ranta.

Loss of Lieutenant Roth and Null

The loss of Lieutenant J. Roth, U.S.N., and Lieutenant J. Null, U.S.N., in Navy Balloon A-2000 in Lake Erie during the Indianapolis Balloon Race has deeply saddened all associates, and particularly Naval Aviation.

Rear Admiral W. A. Moffet, Chief of the Bureau of Aeronautics issued the following statement on July 30:

The death of Lieutenant Roth in one of the most unfortunate tragic happenings in the history of Naval Aviation. He was a man of all his possessions, a man of great personal duty and in the service of his country for the advancement of aeronautics. Those who had the good fortune to know him will bear witness to how many sterling and kindly qualities both in mind and as a man.

The loss that Lieutenant Null is still arising as ground for regret and lament. We will not relax in any detail our efforts to find him still with every chance for his recovery now enhanced.

Official dispatches reaching the Navy Department on July 29 reported the recovery of the body of Lieutenant L. J. Roth, U.S.N., pilot of the Navy Balloon A-2000, found in Lake Erie.

Of the loss of Lieutenant L. J. Roth, U.S.N., who has not yet been positively identified, the Naval records show that he was born in New York City on January 24, 1888, and graduated from the Naval Academy in 1912. He was assigned to the balloons formed from the A-2000 with one located in Lake Erie on July 9. A Naval Academy ring, and the body of L. J. Roth, Jr., on his graduation which was issued to the individual, served to identify the body as that of Lieutenant Roth.

Lieutenant J. Roth was born in Ohio, May 24, 1880, and graduated from the Naval Academy in 1912. He was assigned to the balloons formed from the A-2000 in 1920. He took part in the National Balloon Meet at Birmingham that year, and had been on duty at the Naval Air Station at Hampton Roads, as assembly and repair officer, for two years. In February, he was ordered to Lakehurst, N.J., as connection with the assembling of the crew for the A-2000.

He was not married, has no known address he is believed to be a native of Toledo, Ohio.

Lieutenant Roth, the other of the missing naval balloons, was found in fragments April 14, 1920. He was a member of the crew of the British Royal Flying Corps which fell over the English Channel two years ago with a loss of 42 lives. His name, though, was not on the list as he was not a passenger on the trip.

up of the great airship. When he returned to this country with the remaining crew members, he was detailed to the Naval Air Station at Hampton Roads. Up to the time of his entry into the air as duty at Lakehurst in connection with the carrying of the mail, he had never seen an airship. He is married and has a son, Robert, 2, and a daughter, 1.

"I chose a log kept by Lieutenant Roth, together with the names and personal effects of the balloonsists, were found intact in the ropes which dragged behind the bag as it lay on the ground."

The last entry was at 5:50 a.m., July 7. It was of only two words—“All aye.”

It was with great difficulty that this and other entries in the log were deciphered. The notes scrawled on pages of paper had been pasted onto a pocket of Lieutenant Roth's coat pocket. One page was torn and the handwriting illegible. The other read: “Will try no more absurdities and get a new generator. We ought to sink at daylight.” (This is usually referred to as a previous flight on an airship.)

Although considerably muddled by water, this was followed by another note: “July 7, 1928, 12:15 a.m. Flying northwardly over Europe, over at an altitude of 800 ft. 11:15 a.m. Flying 3,000 ft. over Hispaniola, Cuba. 1:30 p.m. 3,200 ft. 3,000 ft. elevation, sleeping forty pounds in weight.”

“At 4 a.m. 2,600 m.”

The final entry in the log gave no location. Opposite in hardly readable script were the words “All aye.”

Probable Cause of Accident

Something in the findings of a preliminary board of investigation which examined the Navy balloon A-6059, an escape valve fitted by Captain Arthur Roth, was responsible for the accident, according to Capt. Fred S. Scott.

Shortly after Lantz, Roth's body was found strapped in his balloon basket, which was floating in Lake Erie, and after hope for recovery of Lantz, Roth's body had been recovered. What was left of the balloon was sent to the naval air station at Lakehurst, N.J., where the two officers were detailed to participate in the examination.

Capt. Frank E. McCravy, commanding at the Lakehurst station, was directed to examine with particular care the escape valve as the base because of a report by Capt. L. L. Dill, another member of the balloon crew, that he had been forced down a few miles from Lakehurst in a faulty valve.

Arthur had tested safety and subsequently inspected the working parts of the balloon. He is said to have found that a piece of iron, defective fabric got into the valve operating when the valve was being closed, preventing closing.

McCraevy was unable to find the source of gas and his craft came to earth. The immediately reported to Washington.

Commander McCravy called in Capt. Robert D. Whyte to examine the construction of the ZRH, or Conoidal Valve, and D. N. Steele, another officer of the ZRH, to inspect the preliminary examination when the balloon was recovered.

It has been learned that they certified the Navy Department that the escape valve on the A-6059 had been opened more than a half turn and the fabric had been forced beyond the cap.

McCraevy let it be known that the special board of inquiry would begin its investigation as soon as it arrived. It is composed of Commander Jacob Kline, Capt. Commandant W. H. Pease and R. J. Miller and Capt. G. C. Baumer.

A Previous Cross-Lake Experience

In connection with the tour in Lake Erie of the crew of Navy balloon A-6059, a log of interest is recall the experience of the 1926 National Balloon Race of the Navy entry, Lt. Col. Eugene, U.S.N.R. pilot, and Lt. j.g. Frank Stevens, U.S.N.R. co-pilot. Starting from the northeast shore of Lake Erie at 6:30 a.m., Sept. 27, placing three balloons in the race. This ended, unfortunately, the most thrilling flight ever undertaken by Navy pilots in a free balloon.

Successful Light Please



(1) Major R. Herbert
British light plane "Wren" (7 hp.) and its pilot, Sqn. Leader
Wright, who flew it in the recent R.A.F. Patrol
near London.

Larsen Vindicated at Insurance Trial

Again Urges N.A.A. to Settle Controversy over Larsen Efficiency Trophy

In the suit at Commercial Union Assurance Co. against John W. Larsen, tried in the Supreme Court of New York, for reversion of the Larsen trophy, a decision was reached with the hearing of the Larsen testimony yesterday before the jury, after rendering its verdict, signed a statement in holding up Mr. Larsen's contention. The jury stated eleven in one in favor of Larsen and on their statement recorded their unanimous recommendation, and made clear that they believe him to be entitled to his award.

The first in question, discussion. The insurance, five airplanes and many motors and such other equipment, happened on Feb. 8, 1922, through a German mechanic Rudi who claimed in a statement under oath that the fire happened accidentally from a short spark he was using while soldering insulation. After investigation, the court found the surprise came out of nowhere. The trial developed that the aircraft was owned by Capt. C. J. Wrightson and had been at C. H. Brundrett's, Tulsa, Okla., some time and engaged lawyers and detectors. It will be remembered that Mr. Larsen presented the aeronautic committee with the general description of Wrightson's entry. It was claimed that Wrightson had stated that two weeks R.V.A. machine with a 225 hp. Hispano had carried a metal load of 1388 lb. (which would include fuel tank) and had averaged a speed (allowing for turns) of about 100 mph. on a gasoline consumption of only 9 gal. per hour. Mr. Larsen, however, maintained that he had a mechanical impossibility and was forced to fly extremely slow for greater range, and offered Wrightson \$10,000 cash and the \$1000 prize money was to Larsen's machine, or a total of \$11,000 cash, if Mr. Wrightson would fly or have his machine fly for only one hour within 20 per cent of the 8 hr. per hour average claimed by Wrightson, and if Wrightson could make good his claim. Larsen offered in addition to giving Wrightson \$10,000 cash to apologize for his having brought the honesty of the performance. This Wrightson refused to do.

Mr. Larsen then immediately filed protest with the Aero Club of America, which held a P.A.T. license under whose rules the race was held. Capt. D. E. Brundrett, Chairman of Contest Committee, accepted Larsen's protest and notified the Omaha Aero Club of the fact and filed under the rules no prize money can be paid out until the appeal is finally disposed of. The Omaha Aero Club ignored Capt. Brundrett's instructions and paid Wrightson the first prize and dismissed Larsen's protest. The reason given was that, which he thought necessary, the grounds were not met. The protest was dismissed and protest was discarded, nevertheless, that he claimed to have won first and by a wide margin, would not consider second and third. Wrightson took the prize money and Brundrett's protest was returned to him where he refused to do.

The case was referred before a special investigating committee of the Aero Club of America, which recommended that the award be withdrawn by holding a memorandum, expert pilots and aeronauts of high standing—all claiming it a physical impossibility for the R.V.A. machine to have flown the race on a gasoline consumption of only 9 gal. per hour. The R.V.A. pilot Lloyd T. Miller, holding fast to his theory that it was impossible, even the performance of the machine was so phenomenal it would do very least require about 14 gal. and possibly all of it, expert testimony harmonized with the trial pilot's statement. McCord Field estimated the R.V.A. of fuel consumption of 10 gallons.

Subsequent to the decision before the special committee of Aero Club of America, an affidavit by Larsen was presented in which he, Larsen, refused to desist from his position with the gasoline economy, for only one of the Wrightson entry, but also on the other entry flown by "Sun" Larsen. Larsen swore that he had managed to get over 14 gal. more gas onto the Sun Larsen ship than the

judges knew about, but that Larsen discovered this discrepancy as he was taking off, and while flying his first lap decided to land and get the more gas he had. Larsen was called before the committee and recited the statement of Larsen.

Larsen further testified that he insisted on the description in connection with the accounting of gasoline left over Wrightson's machine at end of the race whereby Wrightson must received credit for much more "left over" gas than he ever had. Larsen was called before the committee in person and was questioned at length and reviewed every detail of his affidavit.

Henry Craig, well known engineer and expert model of the monoplane company, stated that in his opinion the gasoline consumption claimed by Wrightson was not possible and that the conclusion of discrepancy by Larsen was the logical one.

The case was finally referred to the Contest Committee of the Aero Club of America, and its first step was to make another demand on Wrightson to return the prize money held contrary to P.A.T. rules and to make the refund without loss in time, or other quantity time is deferred because of the final decision.

The Wrightson entry failed to comply with the demand for the return of the prize money, and the committee, carrying on an extended trip to Europe to study monoplane aviation, the case was held up pending his return to America. During Mr. Larsen's absence in Europe the defendants, employed by Mr. Wrightson, were never seen and no other efforts to collect the money were made. Mr. Larsen, however, collected the machine back which cost him \$1000, and the \$1000 prize money was to Larsen's machine, or a total of \$11,000 cash, if Mr. Wrightson, would fly or have his machine fly for only one hour within 20 per cent of the 8 hr. per hour average claimed by Wrightson, and if Wrightson could make good his claim. Larsen offered in addition to giving Wrightson \$10,000 cash to apologize for his having brought the honesty of the performance. This Wrightson refused to do.

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The Omaha Aero Club ignored Capt. Brundrett's instructions and paid Wrightson the first prize and dismissed Larsen's protest. The reason given was that, which he thought necessary, the grounds were not met. After the closure of the case, Larsen again presented with his appeal on the well-known Omaha machine, to the Aero Club of America, but in the meantime turned to the F.A.T. Larsen over to the National Aeromobile Association, the latter, in light moreover to the Aero Club of America, adapted to meet up this pending appeal. The case, all of which was to stand up this pending appeal, was turned over to Colonel Larsen, Chairman of the new Board of Control, by Mr. Larsen who now expects a speedy disposition of the long-drawn-out case.

Mr. Larsen makes the following reply to some disbarred critics who have claimed that when he offered the validation of his record to the F.A.T. he would be unable to do so: "Mr. Larsen feels that this criticism is entirely untrue, because among the fifteen or twenty originally entries there were two or three Fokker-Espenagger types of the latest model, powered with the identical engine as Mr. Larsen's R.V.A. design and which therefore should have had much worthy opposition to the 225-hp. Hispano and made a most interesting competition. Two of these machines were types. That the Fokker ships did not reach Omaha by reason of fuel economy, of course, is not appreciated by Mr. Larsen several months as before he decided on the trip."

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Official Bulletin of
National Aeronautic Association of U.S.A.
Edited by F. W. Hough, Contest Manager; Color Address, McCor-
d Field Headquarters, 111 Morris Place, New Haven, Conn.

New Records Confirmed by F.A.T.

"Here the publication of official world's record three months ago, many fine performances have been accomplished. In the first place, we note the very great effort in the United States, where the military air service under the perfect control of the National Aeronautic Association, have surprised almost all records for Class A (Aeromobiles). They have exceeded the world record for high speed held by Sadi LeLocre since 1920 for 2000 kilometers. Larsen, Oakley G. Kotter and John A. MacMurdy became holders of records for distances, up to 4 miles, 2000, and distance, 46500 kilometers.

"In the second place records have been broken, among them, speed for 500 kilometers, altitude for 10000 feet, and distance for 1000 kilometers, all by Lieutenant Carrier, altitude with 200 kilograms weight by Captain Craig. These records will not show in the table of records as of the 1st of July, for during the preceding three months they were broken again, but we think it worth while for the history of aviation to make note of them in our bulletin.

"In Spain, Thoray obtained the record with 560 kilograms of useful load.

"During this time Claude on a 4 motorized Bleriot machine, altitude for 10000 feet, and distance of altitude with 1000 kilograms of useful load, easily surpasses, at Hanoi, 5000 meters, thus obtaining the record for height of Class B (monoplane aeroplanes).

"Never since the foundation of the F.A.T. has the struggle been so keen, and it is an agreeable surprise to see the ice broken in the United States, where the military air service of the world, and the enthusiastic men who work with enthusiasm to gain these. From this excellent sporting competition good progress will be made, to the great benefit of aviation throughout the world."

The above was taken from the official bulletin of the Federation Internationale d'Aviation, the International of Aviation which has just been received at National Headquarters.

An interesting account of the March meeting of the F.A.T. at Paris at which F. W. Hough (Chairman of the Foreign Relations Committee of the N.A.A.) presided is given in the issue of British and the following is an extract from the Minutes of the meeting concerning the action of the F.A.T.'s proposal to change the amateur flight regulations:

"M. Tissandier read a very interesting report sent to him from America regarding a method of calculating speed records; and the discussions, for records of duration and distance, were continued to come to the point of agreement. He indicated that two proposals arrived too late for them to be put into the order of business, according to the established procedure, however, that they ought to be presented to the delegates who could, after having considered them, give an enlightened opinion at Gerzende.

"The F.A.T. voted to accept the two proposals in these propositions, which appeared to measure record as aeronautics. It was decided that the officials would present a report on them from the Scientific Committee of the F.A.I. which report will be presented at this meeting."

National Balloon Race

The winner of the National Elimination, Balloon Race held at Indianapolis, July 4, are as follows:

1. Lt. Bob. B. Oldham, U.S.A., 2½ miles W. of Mandeville, La., 1405 ft. altitude.
2. Lt. J. C. Johnson, U.S.N., 2½ miles E. of Glen Campbell, La., 3000 ft. miles.
3. Lt. E. Honeywell, C.R., 3 miles N. of Brundtton, N. Y., 3872 miles.
4. Capt. L. T. Miller, U.S.A., 4 miles E. of Ford City, Pa., 5300 miles.

5. G. E. McCollough, G.C.C., 2 miles S. of Franklin, Pa., Pa., 232 miles.

6. Lt. F. D. Culver, U.S.M., 4 miles S.E. Allison, Ohio 364 miles.

The greatest single distance has been scored by the United States Aerostatic Service in the National Elimination, the record of 5000 being reported in the official log of each competitor.

The winners of first, second and third place have been selected as a team to represent the United States in the Goodwill Balloon Race to be held at Brussels, Belgium, Sept. 29, 1923.

The winners of fourth, fifth and sixth place have been selected as a team to represent the United States in the Goodwill Balloon Race to be held at Berlin, Germany, Oct. 1, 1923.

The Indianapolis Chamber of Commerce is to be congratulated on the splendid way in which the Balloon Race was handled, particularly the method used in controlling the balloons immediately before the launch and for the prompt handling of the various emergencies that arose.

Good race and these scores prove the race and competition intensified, throughout the time need of the balloon wags in the air. Previously every pilot reported having drifted into severe wind and rain storms.

The official logs of the various pilots have been received at the Indianapolis Chamber of Commerce. Among the most interesting was the experience of Ralph Updegraff, who between 8000 feet up at a height of 5000 ft., forcing his balloon to descend, losing his balloon as a parachute.

"Some regrettable and sad accidents marked the event in the lives of Louis J. P. Roth and T. B. Hall, Nevil Edmunds, and others. The most tragic was the death of Lt. Hall, who died in the course of the race. The body of Edmunds (Nevil) has not yet been found but there is no lack up on the records for his balloon up at a height of 5000 ft., forcing his to descend.

"One regrettable and sad accident marked the event in the lives of Louis J. P. Roth and T. B. Hall, Nevil Edmunds, and others. The most tragic was the death of Lt. Hall, who died in the course of the race. The body of Edmunds (Nevil) has not yet been found but there is no lack up on the records for his balloon up at a height of 5000 ft., forcing his to descend.

"H. E. MacMurdy who landed his plane on the race was probably the last one to have seen the inflated balloons as it was drawn away like kite line Tuesday during a heavy rain.

"H. E. MacMurdy who landed his plane to make a landing on a high cliff on the edge of Lake Erie near Huron, N. Y.

Free Flying Scholarships

The National Aeromobile Association expresses that it has been greatly gratified by the response of young men who choose to learn to fly aircrafts free of expense in America by obtaining flying, by obtaining 169 members for its scholarship fund.

These scholarships, on the average, are worth \$250, and this offer of the National Aeromobile Association is made public through the Aerostatic Association of the United States.

In addition to the free flying scholarships there have been donated to the National Aeromobile Association a \$500 gift plus, completely equipped for flying, to be awarded to the applicant who shows a strong desire to learn to fly, and who has a record of flying, and who brings with him the largest number of members.

Those who are interested in the free flying scholarships are encouraged to write to the Aerostatic Association to receive a membership fee to receive cash awards toward paying their training expenses in proportion to the number of excess members they obtain.

Thus the winner of the contest would not only learn to fly without cost, but have the training expenses free, and be able to go to his local club to receive a membership.

The winner of contestants at a city will be funded to one of 25,000 population.

The contest opens Aug. 15, and closes Sept. 30, 1923.

Members are earnestly requested to render all assistance possible to contestants. Advertising to newspapers of the area of the individual, newspaper in the foreign language will be of great service.

It is interesting to note that the Royal Aero Club of Great Britain is conducting a contest sponsored along the lines of the above.

The objects of the Royal Aero Club are

INTERNATIONAL AIR RACES

ST. LOUIS FIELD, October 1-2-3, 1923

Don't Miss Them

\$13,300 CASH PRIZES
\$30,000 IN GOLD AND SILVER

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Including

- Pulitzer Trophy
- Liberty Engine Builders' Trophy
- "On to St. Louis" Trophy

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FASTEST AIRCRAFT IN THE WORLD

AERO ENGINES, PROPELLERS, ACCESSORIES

The fastest ARMY and NAVY and MAIL PLANES are entered in the races.

	Total Prize
1. September 20 to 30—"On to St. Louis" for St. Louis Chamber of Commerce Trophy Civilian Only	\$1,000
2. Monday, Oct. 1—The \$10,000 (10 H. P. or less) for Flying Club of St. Louis Trophy Civilian Only	\$1,000
3. Monday, Oct. 1—Observation Plane for Liberty Engine Builders Trophy Military Only	\$1,500
4. Tuesday, Oct. 2—Last Commercial Handicap (200 H. P. or less) for Aviation Country Club of Detroit Trophy Civilian Only	\$2,000
5. Tuesday, Oct. 2—Large Capacity Plane for Merchant Exchange of St. Louis Trophy Civilian and Military	\$2,000
6. Tuesday, Oct. 2—Model Race for Mailplane Trophy Members Junior Flying League, National Aeronautic Association	\$ 500
7. Wednesday, Oct. 3—Air Mail Plane for Defense News Air Mail Trophy U. S. Air Mail Planes	\$1,500
8. Wednesday, Oct. 3—High Speed Plane for Pulitzer Trophy Civilians and Military	\$4,000

Endorsed by President Warren G. Harding and the Secretaries of the Army and the Navy and the Postmaster General. Sanctioned by the National Aeronautic Association of the U. S. A. under the rules and regulations of the F. A. I.

For full information, description of trophies, entry blanks etc. address

FLYING CLUB OF ST. LOUIS
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St. Louis, Mo.

- To encourage flying for purposes of transport and national defense.
- To assist persons interested in flying and to assist and encourage any one person or organization engaged in advancing aviation.
- To promote flying contests in various parts of the country and other places.
- To encourage progress in design of aircraft and engines.
- To advance the art of flying.
- To assist the development of aviation by providing facilities at suitable localities and by offering prizes.
- To secure uniform legislation relating to representations.
- To establish a Bureau of Information and Advice on Air Travel, both at home and abroad, customs regulations, passenger tickets, etc.

Prizes have been offered as follows:

Free Membership.

- Persons introducing five Associates will have free Associatehip for one year, enabling them to receive all benefits of the Association.
- Prizes including twenty Associates will be entitled to a free trip by air (or rail) to Paris, Brussels or Amsterdam and return, provided advance has not been taken of offer (A).

Free trip by air (or rail) to Paris, Brussels or Amsterdam and return, provided advance has not been taken of offer (B).

- Persons introducing fifty Associates will be entitled to a free trip by air (or rail) to Paris, Brussels or Amsterdam and return, provided advance has not been taken of offer (C).

Free Membership.

- Persons introducing two hundred Associates will be entitled to free training in flying for a Pilot's Certificate (this must include 100 pounds), provided advance has not been taken of offers A, B or C.

Personals

Among visitors at National Headquarters recently were Frank S. Lehman, Vice President of the F.A.I. and Chairman of the Finance Committee of the N.A.A.

Mr. Lehman spent several months' stay in this country and reports many interesting aerostatic developments abroad. He also visited the Chapelle Aerostatique at New Orleans, where he witnessed the re-enactment of the famous balloon flight from New England. Mr. Lehman is an enthusiastic and active member of the Association and made a very interesting report on the New Orleans meeting.

E. J. Walker, Governor of the 3rd District, stopped at Headquarters during his visit to the country with his passenger line at Colonial Beach, Va., in hunting for membership in the N.A.A.

Alexander Klemm of New York University, was a recent visitor.

Warren Collier, of Providence, who is installing the starting apparatus for the 2000 rated oil at Headquarters, during a recent trip to Washington.

A very interesting letter has just been received from Mr. Ralph Cross, Vice-President and Governor of the 7th District and member of the Publicity Committee, enclosing the July "Fly Leaf." Mr. Cross proposes to make his District the "model" in the use of the new starting apparatus.

Among the supporters and backers of the Association are the following Governors of States throughout the country: Gov. Lee M. Russell, Jackson, Miss.; Gov. W. W. Bowdoin, Montgomery; Mrs. Gov. Tom W. Hardwick, Atlanta, Ga.; Gov. Tom G. McCall, Columbia, S. C.; Gov. Austin Peay, Nashville, Tenn.; A. O. E. Allen, Indianapolis, Ind.; Gov. John W. Davis, El Paso, Texas; C. E. Smith, Oklahoma City, Okla.; Gov. Stephen C. Bondurant, Cannon City, Mo.; Gov. Charles R. Mabry, Salt Lake City, Utah; Gov. Wm. S. Glass, Providence, R. I.

The second report of the Canadian Air Board has just been received at these Headquarters through the medium of the Air Board at Ottawa, and members will be furnished any information in connection with Canadian interests upon request.

Chapter Roll

Chapter No. 1 New York City, N. Y.
See Ardbrook Block
Treas. B. Donaldson Waddington
Chapter No. 2 Philadelphia, Pa.
See Ardbrook N. Taylor
V Pres. Staged B. Eckert
Sec-Treas. G. T. Wellington
Chapter No. 3 Des Moines, Iowa.
Officers not yet elected.
Chapter No. 4 Akron, Ohio
Pres. P. W. Lohfeld
V Pres. John H. Gummere
Sec. Elmer Alles
Treas. Norman G. Nelson
Chapter No. 5 Wichita, Kans. It has

Next Chapter Roll

Associations in form Chapter Charter Member Committees have been invited from these cities, and the work of establishing is actively proceeding:

Fifth District.

Leland Mace, Chairman, Arthur F. Woodin, Lowell San
Monroe, N. H.; Chairman, Frank Koen, Worcester
Team Leader
Springfield, Mass., Chairman, Ralph E. Whittle, Sturte
Ward, Worcester, Mass., Chairman, Samuel H. Colton, T2 Me
chanics Street
Second District
Montclair, N. J., Chairman, Geo. W. Kyppel, 168 Holland
Ave.
Petersen, N. J., Chairman, Geo. S. Wheat.
Third District

Philadelphia, Pa., Chairman, John Eastwood
Pittsburgh, Pa., Chairman, B. H. McMillin, R. F. Jones
Building
D. C., Chairman, Col. Char. D. E. Chandler,
1716 H St., N. W.
Fourth District

Colegate, S. C., Chairman, Hon. Thos. G. McLeod, Gov.
of S. C. State Capitol.
Jacksonville, Fla., Chairman, Robert L. Fisher, People's
Bank
Tampa, Fla., Chairman, Carlos C. Campbell, Board of
Estuaries
Marion, Ga., Chairman, D. L. Chankoff, Washington
Bank
Miami, Fla., Chairman, E. B. Adkinson, Guarantie Title
& Mortgage Co.
Tampa, Fla., Chairman, J. E. Addicks, Chamber of
Commerce
Nashville, Tenn., Chairman, Richard D. Graves, 554 State
Rte. 100
New Orleans, La., Chairman, Alton S. Mackell, 485 Walton
St.
St. Petersburg, Fla., Chairman, Harry W. Thompson, Pan
Gulf Coast Airline
Savannah, Ga., Chairman, J. H. Weston, Standard Shipping
Co.
Tampa, Fla., Chairman, Capt. Wm. O. Riven, U. S. Army
Fifth District

St. Louis, Mo., Chairman, C. H. Wolsey, 310 So. Eighth
St.
Sixth District

Detroit, Mich., Chairman, Col. C. G. Edgar, Board of Comm
Aviation, Mich., Chairman, Arthur A. Schupp.
Seventh District

Minneapolis, Minn., Chairman, E. F. Chapman, Jr., Aero
Club of Minneapolis
St. Joseph, Mo., Chairman, C. H. Wolsey, 310 So. Eighth
St.
Eighth District

Tucson, Ariz., Chairman, Ben G. Hill
Ninth District

Long Beach, Calif., Chairman, Roy S. Gaudie, Western Air
Corp.
San Diego, Calif., Chairman, H. E. Morris, San Diego Union
Seattle, Wash., Chairman, H. N. Goet, Boeing Airplane Co.

Housdale, T. H., Chairman, Illus. W. E. Farrington, Gen.
of Illinois

Interested in Chapter Organization

Members in the following cities have applied for interest in local chapter organization and have agreed to make application to form Chapter Charter Member Committees in the near future:

First District.

Wilmington, Del., Atlantic City, N. J., Jersey City, N. J.
Hammonton, N. J., Glenside, N. Y., Rochester, N. Y.
Third District

Concord, Md., Durville, Va., Norfolk, Va.
Fourth District

Chattanooga, Tenn., Atlanta, Ga., Augusta, Ga., Pensacola,
Fla.
Fifth District

Indianapolis, Ind., Vincennes, Ind., Columbus, Ohio, Dayton,
Ohio, Lorain, Ohio, Evansville, Ind., Wheeling, W. Va.
Sixth District

Chicago, Ill., Milwaukee, Ill., Rock Island, Ill., Battie
Creek, Mich., Muskegon, Mich., Lansing, Mich., Racine,
Wis., Milwaukee, Wis.
Seventh District

Des Moines, Iowa, Waterloo, Iowa, Topeka, Kan., Duluth,
Minn., Kansas City, Mo., St. Louis, Mo., Omaha, Neb.,
Honolulu, N. D.

English District

London, Eng., Darwen, Dak., Fort Collins, Colo., Ponca
City, Okla., Bay City, Mich., Toledo, Ohio, Grand
Cafe, Calif., Holbrook, Calif., Long Beach, Calif., Boise, Idaho,
Honolulu, Maui, Eugene, Ore., Portland, Ore., Cheyenne, Wyo.

Where does your city stand?

What are you doing to put on the Chapter Map?

Important Notice

The question of minimum requirements for chapter organization on a basis of population according to the following schedule has been submitted to the Divisions for approval and announcement will be made in the near future:

Cities of 50,000 or less population	— 25 members
= 50,000 to 100,000	— 50 "
= 100,000 to 200,000	— 100 "
= over 200,000	— 150 "

Preliminaries to Chapter Organization

Any organization interested, or applying for membership in the N.A.A. must send a letter to the Secretary to form a chapter charter member committee together with membership dues for any member not already a member. Upon receipt and approval of this application National Headquarters will send to the designated Chairman or secretary of the Committee full instructions for forming the organization, membership dues, publications and other materials needed for the same.

When the maximum number of members is attained, the charter will be ordered engrossed and arrangements made to reduce half the membership fees as the local chapter funds.

APPLICATION TO FORM CHAPTER MEMBER COMMITTEE

To the National Association of Aviation, Inc., P. O. Box 2.

We the undersigned members of an organization in the Association apply for the authority to form a committee to form a chapter of the Association.

If your town does not appear on the "Chapter Hall" or the "Chapter Map" get two or more men to sign this application with you and send it to today.

Memorial Stone for American Aviators

It is the desire of the members of Headquarters to see whether subscriptions to The Memorial Stone for American Aviators, who fought and died in the Chinese Therapy in Manchuria and in France, have been sufficient to meet the cost of erection. Although the number of subscriptions received has been very gratifying, a great sum will have to be forthcoming before the fund is complete.

Have you forgotten yours?

Twin City Opens Air Port

July 10 marked the opening of another great airport known as the Wild-Chandlerville Two-Day Air Port at Minneapolis.

This field was dedicated in the memory of Leon Ernest "Red" West, First Army Sergeant, U. S. Army, and Cyrus A. Clark, Second Lieutenant, Lafayette Guards, French Army Service, favorite son of the Twin Cities who were killed in the battle lines, and were cited by the French and American governments.

The Air Club of Minneapolis, the St. Paul Association, the Minneapolis Civic and Commerce Association, and the Chamber of Commerce of the Twin Cities joined to make this a big event in Mid-West aviation.

Minneapolis has a large membership in the N.A.A. and we hope the date is not far distant when a chapter will be presented to a fine chapter there. No other Air Club of the same name seems more appropriate with the spirit that animates the N.A.A. in leading business men and Air Reserve officers.

Over 300 leading business men and Air Reserve officers attended the Club's annual dinner June 29, and adopted a program for making the Twin Cities an art port of national importance, and for bringing the Pacific Route in 1935.

Area Exhibition at Gothenburg

Several aviation bureaus have suggested their exhibition of attendent the International Aero Congress at Gothenburg which takes place July 20-Aug. 12, 1933 during which the newest aircraft of the N.A.S. will be held, and at which the N.A.A. will be represented by Dr. J. J. S. Cole, Max. C. Wright, Charles B. Hall and Mr. A. L. Highland, members of the Foreign Relations Committee.

The official program has just been received at National Headquarters and copies will be forwarded upon request.

Headquarters received July 12 application to form a chapter in Honolulu, with Governor Farrington's signature as chairman of the committee.

Midwest Air Men Establish Record

Planes on the Maryland State National Guard Unit have just completed a remarkable record as follows: By having 3,100 miles flown from their Anderson, Logan Field, Baltimore, Md., since June 20, 1932, without a crash or a accident.

The Association extends its congratulations to Maj. P. E. Hartman, Captain of the Maryland Guards, and the Maryland National Guard Air Unit in view of the success of this Squadron for their achievement. This is another demonstration of what proper control and regulation can do for safety in aviation.

Air Chief Wins Wings

The Association extends its congratulations to Maj. Gen. Thomas J. Patrick, Chief of Air Services, on the occasion of his retirement as Army General Patrick is the first officer of his rank who has ever learned to fly having completed the regular army qualification tests at Bolling Field recently.

Application for Pilot's Certificate

An application for pilot's certificate has just been received from Michael Stoyan of the Czechoslovak Aero Club of Prague, who has been sent to the United States for the purpose of studying the more advanced stages of the service in this country.

IN MEMORIAM

J. H. Blackwood
1805 Park Road
Washington, D. C.
July 5, 1933

Orders to Officers

Lient Cmdr. DeWitt C. Ramsey, skip. Aqft on Staff, C. U. S. Fleet, to temp duty, Naval Air Station, Pensacola.
Lient. Robert L. Fuller, de. AIRCRAFT Squadron Battle Fleet to duty, Naval Air Station, Pensacola, Fla., Pensacola.

Lient. Cmdr. Claude E. Clark, (H.C.) de. Naval Air Sta. Manzano Roads, to temp duty, B.C. school of application, East, Stratford, Arkans., to duty U.S.A. Infan.
Maj. (Capt.) J. Gremont, detached U.S.A. Cavalry, to duty, The Naval Academy, Annapolis.

Lt. (2d) Karl R. Delage, detached U.S.S. Wright, to temp duty, Naval Av. Philadelph.

Lt. Charles H. Legendre, detached Bureau of Aeronautics, to special course, M.I.T., Cambridge, Mass.

Lient. Cmdr. W. F. Warner, detached U.S.S. Wright to duty, U.S.A. Cavalry, to be assigned to Board when recommended.
Lient. John M. Sheldon, detached, Air Squadrons Scouting Fleet, to Bureau of Aviation.

Ens. Melvilleine N. Gilbert, at Supply Corps School of Application, at Naval Armament Factory, Navy Yard, Phila., to Bureau of Navigation, Det. Office, detached, Bureau of Aeronautics to U.S.A. Cavalry.

Lient. Thomas E. Rendall, detached Aircraft Squadrons Scouting Fleet, to Recruitin' Ship, New York, N.Y.

Lient. Ralph Wyman, detached Aircraft Squadrons Battle Fleet to U.S.A. Cavalry.
Ens. Harry J. McNaught, detached Aircraft Squadrons Battle Fleet to U.S.A. Cavalry.

Teaching Radio to Sleeping Students

Further reports from the Naval Air Station at Pensacola, Fla., on the success that has been attained in teaching radio to students who have been unable to sleep give interesting information on the progress of this novel and exciting experiment. In fact it may be said that the experimental stage in the trials has been past and the method has become standard, so a means of instigating students from failure in the summer.

When the test was started twelve students were insatiable, failing to progress in radio work for two nights running which made it impossible for the students to sleep; only two of the students were insatiable, and these two were last left before the experiment was finished, progressing steadily as it.

The procedure has been to have the students sleep on the radio sets, the operator making no contact or touch to the regular signal periods. Operators and managers of wireless sets all night. The students concentrate on the messages that are sent through until they drop off to sleep. To quote a report on the subject:

"It is very interesting to watch the students during one of these experiments. At the opening of the session the operators immediately fall asleep; in some cases the students will even dream most soundly in their sleep. If the sending stops or the rate of sending changes appreciably, it is easy to disturb them, and in most cases will arouse them. Even in the model of their deepest slumber, the set, 9.0-12" at a different rate of speed will awaken them immediately."

It is now known that there are electrical sending machines which will send all night and do away with the necessity for an operator for future classes.

Ordnance Equipment on Planes

It has been decided that the practice of removing ordnance equipment from planes which are not actively in use retards the development of aviation techniques, since it removes the incentive to develop an installation that will stand up under actual operating conditions. Therefore the Commandant, Aircraft Squadrons Battle Fleet, has issued an order on the subject that will remedy the condition. The following is from the order:

"It will therefore be the practice for all planes to carry their complete equipment except where some specific reason prevents. When some reason requires the removal of ordnance equipment, it shall be returned as soon as possible."

"Performance tests of planes should be conducted with offensive armament in place."

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See CLASS BOOK Milwaukee, Wis.



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EQUIPPED AND READY TO FLY

Here they are—six men who have just finished their course at the Curtiss Flying School, with the machines presented to them upon their graduation. Each one knows his plane—conditioning and assembling it, and installing the motor each one secured for him at sensible cost, was part of the required work.

How different from the early days! Then, learning to fly meant five thousand dollars—and another five for a ship. Even since the war, though the cost of instruction has been greatly decreased, the price of the plane itself has still been beyond reach of the majority. It remains for the Curtiss Exhibition Company to offer to men interested in aviation, for sport or for business, a combination of instruction, plus equipment, at a price within the means of almost anyone.

Five Hundred Dollars for Instruction and Plane Less Motor

For details as to terms, curriculum, enrollment dates, etc.,

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- 1 MF Flying Boat 3 seater, with Hispano engine \$1,400.00
- 1 MF Flying Boat 2 seater with K6 150 h.p. engine 1,500.00
- 1 MF Flying Boat new, 2 seater, with OXX-6 engine 1,900.00

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Chambers Model A	\$400.00
Standard 21 Hispano installed 3 passenger	1200.00
Standard 21 Hispano 2 Pass.	875.00
Cessna 200B New Motor plane	750.00
Standard 21 Hispano 2 Pass. motor plane	1000.00
New popular GR2 \$16.00; Hispano \$20.00; Standard 21 \$16.00; Wings Cessna Standard, complete sets with tail unit only	1100.00
Plans to build	1000.00

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